

Amendments to the Claims

This listing will replace all prior versions and listings of claims in the application:

Listing of Claims

1. (Previously presented) A process for the synthesis of cumene hydroperoxide, comprising the step of oxidizing cumene to cumene hydroperoxide in a liquid phase in the presence of an oxidizing agent and of a basic resin, said basic resin being a pyridinic resin, said basic resin not releasing inorganic cations to the reaction environment.

2. (Currently amended) A process according to claim 1, wherein the oxidizing agent is oxygen in pure form or in a mixture with other gases, ~~and is preferably air.~~

3. (Currently amended) A process according to claim 1, wherein said cumene to cumene hydroperoxide oxidizing process is run under ~~substantially~~ anhydrous conditions.

4. (Cancelled)

5. (Cancelled)

6. (Previously presented) A process according to claim 1, where said pyridinic resin is selected from the group reticulated poly-4-vinylpyridine (a polymer of 4-ethenylpyridine with diethenylbenzene, CAS RN 9017-40-7), a high-porosity reticulated poly-4-vinylpyridine, and a polymer of 4-ethenylpyridine with diethenylbenzene and ethenylethylbenzene quaternarized with methyl chloride.

7. (Cancelled)

8. (Currently amended) A process according to claim 1, wherein said basic resin is used in quantities between 0.1 g and 60 g of basic resin for each kg of cumene, ~~preferably between 10 and 25 g of basic resin for each kg of cumene.~~

9. (Currently amended) A process according to claim 1, wherein said oxidation reaction is run at a temperature comprised between 60°C and 150°C up to the point when the conversion of the cumene to hydroperoxide is between 5% and 40%, ~~preferably between 20% and 25%.~~

10. (Currently amended) A process according to claim 9, wherein said oxidation reaction is run at temperatures comprised between 90°C and 115°C and for reaction times comprised between 30 minutes and 10 hours, ~~preferably between 1 and 6 hours.~~

11. (Original) A process according to claim 1, wherein said oxidation reaction is run at relative pressures comprised in the range from 0.5 and 10 bar.

12. (Currently amended) A process according to claim 1, wherein said oxidation reaction is run in two or more reactors in series, ~~preferably in three reactors in series,~~ operating at different temperatures decreasing from the first to the last reactor.

13. (Original) A process according to claim 12, wherein the reaction temperature in said first reactor is about 115°C and in said last reactor is about 90°C, and where the remaining oxidation reactors operate at intermediate temperatures.

14. (Previously presented) A process according to claim 1, wherein said basic resin is contained in one or more baskets immersed in anyone of said oxidation reactor or reactors in such a manner that said basic resin is in contact with the reaction environment.

15. (Previously presented) A process according to claim 1, wherein said process comprises a concentrating phase of the reaction mixture exiting from said oxidizing phase for the purpose of separating unreacted cumene from the cumene hydroperoxide product.

16. (Previously presented) A process according to claim 15, wherein said concentrating phase is operated in a direct succession to said oxidizing phase.

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Previously presented) A process for the synthesis of phenol and acetone from cumene, comprising a step of synthesis of cumene hydroperoxide according to claim 1.